Release notes for ENDF/B Development n-054_Xe_126 evaluation



April 26, 2017

- checkr Warnings:
 - 1. A previous error halted parsing of the current section $MAT=5431,\ MF=1,\ MT=451\ (1)$: Parsing stopped

ERROR(S) FOUND IN MAT=5431, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 249 TO 306

- checkr Errors:
 - 1. A variable is outside the allowed ENDF range MAT=5431, MF=1, MT=451 (0): Variable range

ERROR(S) FOUND IN MAT=5431, MF= 1, MT=451
MOD = 1 OUT OF RANGE 0 - 0 RECORD NUMBER 249

2. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=2, MT=151 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY RECORD NUMBER 308

3. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=1 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY RECORD NUMBER 420

4. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=2 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY RECORD NUMBER 447

5. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=4 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY RECORD NUMBER 474

6. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY RECORD NUMBER 491

7. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 17 SECTION 3/ 17 NOT IN DIRECTORY

RECORD NUMBER 500

8. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 22 SECTION 3/ 22 NOT IN DIRECTORY

RECORD NUMBER 505

9. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 28 SECTION 3/ 28 NOT IN DIRECTORY

RECORD NUMBER 519

10. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 51 SECTION 3/ 51 NOT IN DIRECTORY

RECORD NUMBER 530

11. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 52 SECTION 3/ 52 NOT IN DIRECTORY

RECORD NUMBER 547

12. Missing a section in directory so your directory is messed up. This error will break everything also

erything else MAT=5431, MF=3, MT=53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 53 SECTION 3/ 53 NOT IN DIRECTORY

RECORD NUMBER 563

13. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 54 SECTION 3/ 54 NOT IN DIRECTORY

RECORD NUMBER 578

14. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 55 SECTION 3/ 55 NOT IN DIRECTORY

RECORD NUMBER 592

15. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 56 SECTION 3/ 56 NOT IN DIRECTORY

RECORD NUMBER 606

16. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 57 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 57 SECTION 3/ 57 NOT IN DIRECTORY

RECORD NUMBER 619

17. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 58 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 58 SECTION 3/ 58 NOT IN DIRECTORY

RECORD NUMBER 632

18. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 59 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 59 SECTION 3/ 59 NOT IN DIRECTORY

RECORD NUMBER 645

19. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 60 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 60 SECTION 3/ 60 NOT IN DIRECTORY

RECORD NUMBER 657

20. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=61 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 61 SECTION 3/ 61 NOT IN DIRECTORY

RECORD NUMBER 669

21. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=62 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 62

SECTION 3/62 NOT IN DIRECTORY

RECORD NUMBER 680

22. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=63 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 63 SECTION 3/ 63 NOT IN DIRECTORY

RECORD NUMBER 691

23. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=3, MT=64 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 64 SECTION 3/64 NOT IN DIRECTORY

RECORD NUMBER

24. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 65 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 65 SECTION 3/65 NOT IN DIRECTORY

RECORD NUMBER 711

25. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT= 91 SECTION 3/ 91 NOT IN DIRECTORY

RECORD NUMBER 721

26. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 102 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT=102 SECTION 3/102 NOT IN DIRECTORY

RECORD NUMBER 730

27. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 103 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT=103 SECTION 3/103 NOT IN DIRECTORY

RECORD NUMBER

780

28. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5431, MF = 3, MT = 104 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT=104 SECTION 3/104 NOT IN DIRECTORY

RECORD NUMBER 767

29. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 3, MT = 105 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT=105 SECTION 3/105 NOT IN DIRECTORY

RECORD NUMBER

30. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5431, MF = 3, MT = 106 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT=106 SECTION 3/106 NOT IN DIRECTORY

RECORD NUMBER 790

31. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5431, MF = 3, MT = 107 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 3, MT=107 SECTION 3/107 NOT IN DIRECTORY

RECORD NUMBER 802

32. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 2 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 2 SECTION 4/ 2 NOT IN DIRECTORY

RECORD NUMBER 819

33. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 16 SECTION 4/ 16 NOT IN DIRECTORY

RECORD NUMBER 1009

34. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 17 SECTION 4/ 17 NOT IN DIRECTORY

RECORD NUMBER 1020

35. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 22 SECTION 4/ 22 NOT IN DIRECTORY

RECORD NUMBER 1031

36. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 28 SECTION 4/ 28 NOT IN DIRECTORY

RECORD NUMBER 1042

37. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 51 SECTION 4/ 51 NOT IN DIRECTORY

RECORD NUMBER 1053

38. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 52 SECTION 4/ 52 NOT IN DIRECTORY

RECORD NUMBER 1081

39. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 53 SECTION 4/ 53 NOT IN DIRECTORY

RECORD NUMBER 1108

40. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 54 SECTION 4/ 54 NOT IN DIRECTORY

RECORD NUMBER 1135

41. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 55 SECTION 4/ 55 NOT IN DIRECTORY

RECORD NUMBER 1159

42. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 56 SECTION 4/ 56 NOT IN DIRECTORY

RECORD NUMBER 1183

43. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 57 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 57 SECTION 4/ 57 NOT IN DIRECTORY

RECORD NUMBER 1207

44. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=58 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 58 SECTION 4/ 58 NOT IN DIRECTORY

RECORD NUMBER 1231

45. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=59 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 59 SECTION 4/ 59 NOT IN DIRECTORY

RECORD NUMBER 1255

46. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=60 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 60 SECTION 4/ 60 NOT IN DIRECTORY

RECORD NUMBER 1279

47. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=4, MT=61 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 61 SECTION 4/ 61 NOT IN DIRECTORY

RECORD NUMBER 1303

48. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 62 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 62 SECTION 4/ 62 NOT IN DIRECTORY

RECORD NUMBER 1327

49. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 63 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 63 SECTION 4/ 63 NOT IN DIRECTORY

RECORD NUMBER 1351

50. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 64 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 64 SECTION 4/ 64 NOT IN DIRECTORY

RECORD NUMBER 1375

51. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 65 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 65 SECTION 4/ 65 NOT IN DIRECTORY

RECORD NUMBER 1399

52. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 4, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 4, MT= 91 SECTION 4/ 91 NOT IN DIRECTORY

RECORD NUMBER 1423

53. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 5, MT = 16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 5, MT= 16 SECTION 5/ 16 NOT IN DIRECTORY

RECORD NUMBER 1448

54. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=5, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 5, MT= 17

SECTION 5/ 17 NOT IN DIRECTORY

RECORD NUMBER 1504

55. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 5, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 5, MT= 22 SECTION 5/ 22 NOT IN DIRECTORY

RECORD NUMBER 1521

56. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5431, MF = 5, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 5, MT= 28 SECTION 5/ 28 NOT IN DIRECTORY

RECORD NUMBER 1753

57. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5431, MF=5, MT=91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5431, MF= 5, MT= 91 SECTION 5/ 91 NOT IN DIRECTORY

RECORD NUMBER 1869

- groupie Errors:
 - 1. Very small elastic cross section found 0: Small elastic

 ${\tt Multi-Group\ and\ Multi-Band\ Parameters\ from\ ENDF/B\ Data\ (GROUPIE\ 2015-2)}$

ENDF/B Input and Output Data Filenames ENDFB.IN

... [97 more lines]

• fudge-4.0 Warnings:

ENDFB.OUT

1. Missing a channel with a particular angular momenta combination resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"

2. Potential scattering hasn't converted, you need more L's! resonances / resolved (Error # 1): potentialScatteringNotConverged

WARNING: Potential scattering hasn't converged by L=0 at E=2334.5 eV, xs[0]/xs[0]=100.0% > 0.1%

3. Cross section does not match sum of linked reaction cross sections crossSectionSum label 0: total (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.44%

4. Cross section does not match sum of linked reaction cross sections $crossSectionSum\ label\ 1:\ (z,n)\ (Error\ \#\ 0):\ CS\ Sum.$

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.12%

- fudge-4.0 Errors:
 - 1. Calculated and tabulated Q values disagree. reaction label 17: n[multiplicity:'2'] + Xe125 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10701252.54585266 eV vs -1.01281e7 eV!

2. Calculated and tabulated Q values disagree. reaction label 18: n[multiplicity:'3'] + Xe124 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -18304530.54498291 eV vs -1.78642e7 eV!

3. Calculated and tabulated Q values disagree. reaction label 19: n + H1 + I125 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -8274539.465942383 eV vs -7614640. eV!

4. Calculated and tabulated Q values disagree. reaction label 20: Xe127 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 6570111.841064453 eV vs 7225390. eV!

5. Calculated and tabulated Q values disagree. reaction label 21: n + He4 + Te122 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -1932887.082839966 eV vs -1279910. eV!

6. Calculated and tabulated Q values disagree. reaction label 22: H1 + I126-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -1129116.872756958 eV vs -468544. eV!

7. Calculated and tabulated Q values disagree. reaction label 23: H2 + I125_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -6049973.365005493 eV vs -5304520. eV!

8. Calculated and tabulated Q values disagree. reaction label 24: H3 + I124-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -9335527.821960449 eV vs -8675460. eV!

9. Calculated and tabulated Q values disagree. reaction label 25: He3 + Te124-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -6157349.748428345 eV vs -5499540. eV!

10. Calculated and tabulated Q values disagree. reaction label 26: He4 + Te123_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 4996296.619293213 eV vs 5657690. eV!

• njoy2012 Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

- ---message from conver---cannot do complete particle production for mt= 16 only mf4/mf5 provided
- 2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 17 only mf4/mf5 provided
- 3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 group-...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 22 only mf4/mf5 provided
- 4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 28 only mf4/mf5 provided
- 5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 91 only mf4/mf5 provided